IN THE CLAIMS

1-40. (Cancelled)

41. (Currently amended) A method for determining an electromyogram (EMG) signal out of a raw signal comprising the steps of:

obtaining a plurality of signals from a subject via a plurality of electrodes configured to interact with the subject to detect signals from the diaphragm of the subject, each electrode having a signal channel associated therewith;

combining the respective signals of the signal channels to form a multi-channel raw signal that contains an electrocardiogram (EKG) contribution arising from an EKG signal of the subject and an EMG contribution arising from an EMG signal of the subject;

automatically electronically estimating an attribute of said contribution of said EKG signal of the subject to said raw signal and an attribute of said contribution of said EMG signal of the subject to said raw signal, to obtain an estimated EKG signal attribute and an estimated EMG signal attribute; and

dependent on the frequency spectrum of said estimated EKG signal attribute and the frequency spectrum of said estimated EMG signal attribute, automatically electronically determining an EMG window in a frequency range and frequency-domain filtering said raw signal only within said frequency range of said window to obtain said EMG signal as a filtered-out signal.

42. (Previously Presented) A method as claimed in claim 41 comprising filtering said EMG signal that is filtered out from said raw signal.

43. (Currently Amended) A method as claimed in claim 42 comprising automatically electronically dividing said window into at least two sub-windows with respectively different filtering criteria dependent on said estimated EKG signal attribute and said estimated EMG signal attribute.

44. (Currently Amended) A method as claimed in claim 41 comprising automatically electronically determining a width of said window dependent on said estimated EKG signal attribute and said estimated EMG signal attribute.

45. (Currently Amended) A method as claimed in claim 41 wherein said window has a lower frequency, and automatically electronically determining said lower frequency of said window dependent on said estimated EKG signal and said estimated EMG signal attribute.

46. (Currently Amended) A method as claimed in claim 41 comprising determining said window as a window having a constant width starting from a lower frequency, and automatically electronically determining said lower frequency dependent on said estimated EKG signal attribute.

47. (Currently Amended) A method as claimed in claim 41 comprising automatically electronically estimating a noise signal attribute from said raw signal, and automatically electronically determining an upper frequency of said window dependent on said estimated EMG signal attribute and said estimated noise signal attribute.

48. (Currently Amended) A method as claimed in claim 41 comprising automatically electronically determining a middle frequency of said estimated EMG

signal attribute, and using said middle frequency to monitor or measure at least one of muscle fatigue and muscle activity of the patient.

49. (Previously Presented) A method as claimed in claim 48 comprising automatically activating a humanly perceptible alarm dependent on deviation of said monitored or measured muscle fatigue from a reference value.

50. (Previously Presented) A method as claimed in claim 48 comprising automatically controlling a ventilator configured to interact with the patient to provide increased ventilation support to the patient dependent on said monitored or measured muscle fatigue.

51. (Withdrawn) A method as claimed in claim 44 comprising automatically electronically determining a middle frequency of said estimated EMG signal and using said middle frequency as a measure of a degree of sedation of the patient.

52. (Withdrawn) A method as claimed in claim 51 comprising automatically using said middle frequency to regulate an amount of sedative administered to the patient.

53. (Currently Amended) A method as claimed in claim 41 comprising automatically electronically identifying a first derivative of a curve representing said estimated EKG signal attribute, and placing a lower frequency of said window dependent on said first derivative.

54-79. (Cancelled)

80. (Previously Presented) A method as claimed in claim 41 comprising using said estimated EKG signal attribute and said estimated EMG signal attribute to identify a frequency range within said raw signal wherein said contribution of said

EKG signal is weaker than said contribution of said EMG signal, and comprising determining said frequency range of said EMG window to substantially coincide with said frequency range in which said contribution of said EKG signal is weaker than said contribution of said EMG signal.